APPROVED | CHAPTER

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BY GOVERNOR | PUBLIC LAW

STATE OF MAINE

IN THE YEAR OF OUR LORD
TWO THOUSAND

H.P. 1789 - L.D. 2509

An Act Regarding Discharges from Small Fish Hatcheries That Operated Prior to 1986

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 38 MRSA §464, sub-§12 is enacted to read:

12. **Discharges from certain fish hatcheries.** An unlicensed discharge from a fish hatchery is considered, and continues to be considered after it is licensed pursuant to section 413, the same as a discharge licensed prior to January 1, 1986 for the purposes of subsection 4, paragraph A, subparagraph (1); section 465, subsection 2, paragraph C; and section 465-A, subsection 1, paragraph C if the following conditions are met:

A. The discharge was in existence prior to January 1, 1986;

B. The fish hatchery is licensed to cultivate fish by the Department of Inland Fisheries and Wildlife on the effective date of this subsection; and

C. An application from the hatchery for a waste discharge license is accepted as complete for processing by the Department of Environmental Protection within 90 days of notification that a waste discharge license is required pursuant to section 413.

The Department of Environmental Protection shall notify a fish hatchery with an unlicensed discharge that a waste discharge license is required pursuant to section 413 within 90 days of the effective date of this subsection or within 90 days of finding the unlicensed discharge.

06-096
04-061

DEPARTMENT OF ENVIRONMENTAL PROTECTION &
DEPARTMENT OF CONSERVATION:
LAND USE REGULATION COMMISSION

06-096 Chapter 450 &
04-061 Chapter 11: ADMINISTRATIVE REGULATIONS FOR HYDROPOWER PROJECTS

SUMMARY: The Department of Environmental Protection and the Land Use Regulation Commission have adopted joint regulations for the processing of applications for hydropower projects under the Maine Waterway Development and Conservation Act and Maine Rivers Policy. The purpose of these regulations is to provide guidance on the administration of the Act, including guidance on how the Board and Commission will interpret the provisions of the Act and the Maine Rivers Policy and will approach the judgments they must make under the criteria set forth in the Act and the Policy.

1. **Authority.** These regulations are promulgated pursuant to the Administrative Procedures Act, 5 M.R.S.A., Chapter 375; 12 M.R.S.A., Chapter 206-A; and 38 M.R.S.A., Sec. 343-A to interpret the Maine Rivers Policy, 12 M.R.S.A., Sec. 401-405 and the Maine Waterway Development and Conservation Act, 38 M.R.S.A., Sec. 630-637.

2. **Purpose.** In adopting the Maine Waterway Development and Conservation Act, the Legislature established "that it is the policy of the State to support and encourage the development of hydropower projects by simplifying and clarifying requirements for permits, while assuring reasonable protection of natural resources and the public interest in use of waters of the State".

   The purpose of these regulations is to further this policy by providing guidance on the administration of the Act, including guidance on how the Board and Commission will interpret the provisions of the Act and the Maine Rivers Policy and will approach the judgments they must make under the criteria set forth in the Act and the Policy.

3. **Definitions.** The following terms, as used in these regulations, shall have the following meanings, unless the context indicates otherwise:

   A. **Act.** "Act" means the Maine Waterway Development and Conservation Act, 38 M.R.S.A., Sec. 630-637.

   B. **Board.** "Board" means the Board of Environmental Protection.

   C. **Commission.** "Commission" means the Land Use Regulation Commission of the Maine Department of Conservation.

   D. **Commissioner.** "Commissioner" means the Commissioner of the Department of Environmental Protection.

   E. **Department.** "Department" means the Department of Environmental Protection.

   F. **Director.** "Director" means the Director of the Land Use Regulation Commission.

G. **Hydropower Project or Project.** "Hydropower project, or project," means any development which utilizes the flow of water as a source of electrical or mechanical power, or which regulates the flow of water for the purpose of generating electrical or mechanical power. A hydropower project development includes all powerhouses, dams, water conduits, transmission lines, water impoundments, roads and other appurtenant works and structures that are part of the development." (38 M.R.S.A., Sec. 632.3)

H. **Mitigation.** "Mitigation" means any action taken or not taken to avoid, minimize, rectify, reduce, eliminate, or compensate for actual or potential adverse environmental impacts. Such actions include, but are not limited to:

(1) Avoiding an impact altogether by not taking a certain action or parts of an action;

(2) Minimizing an impact by limiting the magnitude or duration of an activity or by controlling the timing of an activity;

(3) Rectifying an impact by repairing, rehabilitating, or restoring the affected environment;

(4) Reducing or eliminating an impact over time through preservation and maintenance operations during the life of the project; and

(5) Compensating for an impact by replacing affected resources or environments or providing substitute resources or environments.

4. **Permit Requirements**

A. **Prohibition.** The Maine Waterway Development and Conservation Act (38 M.R.S.A., Sec. 633) states "No person may initiate construction or reconstruction of a hydropower project, or structurally alter a hydropower project in ways which change water levels or flows above or below the dam, without first obtaining a permit from the (Board or Commission). Normal maintenance and repair of an existing and operating hydropower project shall be exempt from (the requirement for a permit) provided that:

(1) The activity does not involve any dredging or filling below the normal high-water line of any great pond, coastal wetland, river, stream or brook; and

(2) The activity does not involve any dredging or filling on the land adjacent to any great pond, coastal wetland, river, stream or brook such that any dredged spoil, fill or structure may fall or be washed into those waters."

B. **Activities Requiring a Permit.** The following types of activities, by way of example, are subject to the requirement for a permit:

(1) The construction of a new hydropower project, including a new water storage dam, or a new hydroelectric generating facility of any kind, whether utilizing a dam, a natural water feature, natural current velocities, or tidal action;

(2) The reconstruction of a hydropower project;

(3) The structural alteration of a hydropower project in ways which change water levels or flows above or below the dam, including, but not limited to:

(a) The addition or alteration of flashboards; and

(b) The installation of additional or enlarged turbines; and

(4) Any dredging or filling below the normal high-water line of a water body to facilitate maintenance and repair of an existing and operating hydropower project.

C. **Activities Not Requiring a Permit.** The following types of normal maintenance and repair activities at existing and operating hydropower projects, by way of example, are specifically exempt from the requirement for a permit, provided that the activity does not diminish water quality below applicable standards:

(1) The resurfacing or repair of dams, canals, powerhouses, retaining walls, or other structures where no cofferdam, dredging, filling, or permanent water level alteration is involved;

(2) The repair, removal or replacement of flashboards, stop logs, gates, or intake racks where no cofferdam, dredging, filing, or permanent water level alteration is involved;

(3) Removal of materials collected on trash racks;

(4) Removal of dri-ki and other accumulated materials where no significant disturbance of soils or lake or river bottom materials is involved;

(5) Installing or removing booms;

(6) Placement and removal of non-earthen cofferdams temporarily installed immediately adjacent to an existing structure for the purpose of inspecting or repairing the structure;

(7) Removal of sediment and debris from gated canals, tunnels and penstocks from which the water has been removed; and

(8) Sealing of leaks in gates, stop logs and flashboards.

D. **Jurisdiction.** The Board or Commission acquires jurisdiction under the Maine Waterway Development and Conservation Act when a person either files an application to construct, reconstruct, or structurally alter a hydropower project, or initiates the unapproved construction, reconstruction, or structural alteration of a hydropower project, as defined by 38 M.R.S.A., Sec. 632.3 and Sec. 633 and these regulations.

5. Standard of Review

A. **Maine Waterway Development and Conservation Act.** The Maine Waterway Development and Conservation Act, 38 M.R.S.A., Sec. 636, states that the Board or Commission shall approve a project when it finds that the applicant has demonstrated that seven criteria have been met. The criteria are as follows:

(1) Financial capability. The applicant has the financial capability and technical ability to undertake the project. In the event that the applicant is unable to demonstrate financial capability, the (Board or Commission) may grant the permit contingent upon the applicant's demonstration of financial capability prior to commencement of activities permitted." (38 M.R.S.A., Sec. 636.1)

(2) Safety. The applicant has made adequate provisions for protection of public safety." (38 M.R.S.A., Sec. 636.2)

(3) Public benefits. The project will result in significant economic benefits to the public, including, but not limited to, creation of employment opportunities for workers of the State." (38 M.R.S.A., Sec. 636.3)

To meet this criterion, the applicant must demonstrate that the benefits claimed from the proposed project are real, in that these benefits would not result but for the project. Further, the applicant must demonstrate that the project's economic benefits are greater than it's economic costs, and that the resulting net benefit is significant.

"Benefit" is a term which requires a comparison between at least two conditions. Further, this section of the law calls for the Board and Commission to judge if the benefits are 'significant'. This too is a comparative term which can only be reasonably evaluated in light of other courses of action which might reasonably be pursued. Therefore, in order to accurately evaluate the existence and extent of the economic benefits that may result from a proposed hydropower project, it is necessary to compare two alternative futures: the economic conditions likely to exist if the project is built versus those likely to exist without the project.

NOTE: Experience has shown that the vast majority of projects have resulted in significant public economic benefits. This is because these relatively small projects at existing dams have lacked any substantial public economic costs, and the most likely alternative has been continued oil fired generation. However, a small number of projects have required a more thorough analysis of what was likely to happen if these projects were not built. Experience has also shown that these have been new dams which would have resulted in substantial public economic costs.

In cases involving new dams which would result in substantial economic costs, the consideration of alternatives is not limited to continued oil-fired generation; therefore, a demonstration that this criterion has been met must include comparing the benefits claimed from the project against the economic conditions that would otherwise result from any alternative source(s) of energy generation or conservation that might reasonably be pursued in the event that the project is not built.

Economic benefits and costs will be identified and measured using generally accepted methods and procedures, such as those published by the United States Water Resources Council. In accordance with these methods and procedures, economic benefits may include, but are not limited to, increases in the income or purchasing power of Maine citizens, energy security from reducing dependence upon fossil fuels, and creation of employment opportunities for workers of the State.

Similarly, in accordance with these methods and procedures, economic costs may include, but are not limited to, decreases in the income or purchasing power of Maine citizens, the value of other hydroelectric generating opportunities diminished or eliminated by a project, and the elimination of employment opportunities for workers of the State.

(4) Traffic movement. The applicant has made adequate provision for traffic movement of all types out of or into the development area." (38 M.R.S.A., Sec. 636.4)

(5) Maine Land Use Regulation Commission. Within the jurisdiction of the Maine Land Use Regulation Commission, the project is consistent with zoning adopted by the commission." (38 M.R.S.A., Sec. 636.5)

A proposal is consistent with such zoning if the proposed hydropower project, or portions of that project, as occur within the Commission's jurisdiction, are not prohibited uses under the zoning designation and standards in effect at the time of consideration as set forth in Chapter 10 of the Commission's Rules and Regulations.

In those instances where the project, or portions of that project, are prohibited uses under the zoning designation and standards in effect at the time of consideration, the applicant must file and obtain favorable action from the Commission on a rezoning petition or must amend the project to avoid conflicts with the Commission's zoning in order to satisfy this criterion.

(6) Environmental mitigation. The applicant has made reasonable provisions to realize the environmental benefits of the project, if any, and to mitigate its adverse environmental impacts." (38 M.R.S.A., Sec. 636.6)

Mitigation is not necessarily limited to the replacement of affected resources or environments (i.e., in-kind or on-site mitigation) but may involve the provision of substitute resources or environments (i.e., out-of-kind or off-site mitigation). In-kind or on-site mitigation measures will be preferred. Off-site or out-of-kind measures may be acceptable where in-kind or on-site measures are demonstrated not to be feasible or desirable.

Whether an applicant's provisions to realize environmental benefits or to mitigate adverse environmental impacts are reasonable depends in part upon the significance of the resource(s) affected.

(7) Environmental and energy considerations. The advantages of the project are greater than the direct and cumulative adverse impacts over the life of the project based upon the following considerations:

NOTE: Significant cumulative adverse impacts are harms to the environment which add to the impacts of other existing, facilities or uses such that a threshold of acceptability for the total impact is exceeded. For example, when viewed In isolation. a particular project might be seen as having only a minor on-site impact on water quality, e.g., a slight reduction in dissolved oxygen or a slight reduction in a run of anadromous fish. However, even minor reductions in dissolved oxygen at the site to levels well above the minimum acceptable standard might cause downstream areas affected by other existing projects or discharges to violate water quality standards. Likewise, a seemingly small reduction in the number of salmon (say 10 percent loss at the project in question) might, when combined with the effects of other existing dams, cause a run to fail because the number of fish needed to sustain a breeding population was not maintained.

(a) Whether the project will result in significant benefit or harm to soil stability, coastal and inland wetlands or the natural environment of any surface waters and their shorelands;"

(b) Whether the project will result in significant benefit or harm to fish and wildlife resources. In making its determination, the (Board or Commission) shall consider other existing uses of the watershed and fisheries management plans adopted by the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, and the Atlantic Sea Run Salmon Commission;"

(c) Whether the project will result in significant benefit or harm to historic and archaeological resources;"

(d) Whether the project will result in significant benefit or harm to the public rights of access to and use of the surface waters of the State for navigation, fishing, fowling, recreation and other lawful public uses;"

(e) Whether the project will result in significant flood control benefits or flood hazards; and"

(f) Whether the project will result in significant hydroelectric energy benefits, including the increase in generating capacity and annual energy output resulting from the project, and the amount of nonrenewable fuels it would replace."

(8) Water Quality. There is a reasonable assurance that the project will not violate applicable water quality standards, including the provisions of Section 464, subsection 4, paragraph F, as required for water quality certification under the United States Water Pollution Control Act, Section 401. This finding is required for both the proposed impoundment and any affected classified water bodies downstream of the proposed impoundment."

(A) Notwithstanding Section 464, subsection 2, the Department shall reclassify the waters of the proposed impoundment to Class GPA if the Department finds:

(1) There is a reasonable likelihood that the proposed impoundment will thermally stratify;

(2) The proposed impoundment will not exceed 30 acres in surface area;

(3) The proposed impoundment will not have any upstream direct discharges except cooling water; and

(4) The proposed impoundment will not violate Section 464, subsection 4, paragraph F."

"The (Board or Commission) shall make a written finding of fact with respect to the nature and magnitude of the impact of the project on each of the considerations under this (criterion), and a written explanation of their use of these findings in reaching their decision." (38 M.R.S.A., Sec. 636.7)

The benefits of a project need not be greater than its harms for each of the specified environmental and energy considerations in order for this overall criterion to be satisfied. Therefore, this criterion has been met if, in the Board's or Commission's judgment, the applicant has demonstrated that the weight of the advantages of the project is greater than the weight of the direct and cumulative adverse impacts over the life of the project based upon the specified environmental and energy considerations.

Determining whether the advantages of the project are greater than it's adverse impacts requires attaching value or weight to the project's various benefits and harms.

NOTE: Experience has shown that this weighing has not been difficult for the vast majority of projects as no substantial adverse environmental impacts would have occurred to be balanced against the energy benefits of these projects. However, a small number of projects have required a more thorough analysis. Experience has also shown that these have been new dams with substantial adverse impacts.

In cases involving new dams which would result in substantial adverse impacts, the consideration of alternatives is not limited to continued oil-fired generation; therefore, a demonstration that this criterion has been met must include a description of the environmental and energy benefits and harms of the proposed project in comparison with the benefits and harms that would result from any alternative source(s) of energy generation or conservation that might reasonably be pursued *in* the event that the project is not built.

B. **The Maine Rivers Policy: Special Protection for Outstanding River Segments.** 12 M.R.S.A., Sec. 403, declares that certain river and stream segments, designated as outstanding rivers, are to be accorded special protection, by virtue of their unparalleled natural and recreational values. This special protection takes the following form:

"No license or permit under Title 38, Sections 630 to 636, may be issued for the construction of new dams on the river and stream segments subject to this special protection without the specific authorization of the Legislature, or for additional development or redevelopment of existing dams

on the river or stream segments subject to this special protection where the additional development or redevelopment diminishes the significant resource values of these river and stream segments."

The outstanding river segments are identified in 12 M.R.S.A., Sec. 403. The significant resource values of the special protection rivers are those identified by the 1982 Maine Rivers Study, as provided in 12 M.R.S.A., Sec. 403.

Based on this special protection, the Board or Commission can only approve a permit pursuant to the Act for a new dam on an outstanding river segment where (1) the Legislature specifically authorizes the Board or Commission to consider such a permit and (2) the Board or Commission then finds that the project meets the criteria of 38 M.R.S.A., Sec. 636, as outlined in subsection A above.

Similarly, the Board or Commission can only approve a permit pursuant to the Act for the additional development or redevelopment of an existing dam on an outstanding river segment where (1) the Board or Commission finds that the project does not diminish the significant resource values of the outstanding river segment, and (2) the Board or Commission further finds that the project meets the criteria of 38 M.R.S.A., Sec. 636, as outlined in subsection A above.

In determining whether or not significant resource values identified by the Maine Rivers Study will be diminished, the Board or Commission will not consider measures proposed to replace or substitute for losses.

For the purposes of 12 M.R.S.A., Sec. 403, "existing dams on the river or stream segments subject to special protection" shall mean man-made barriers across the outstanding river segments identified in 12 M.R.S.A., Sec. 403, which impound water and which, as of June 17, 1983, had not been breached, deteriorated, or modified to the point where they no longer impounded water at or near their design level at normal flows.

For the purposes of 12 M.R.S.A., Sec. 403, "additional development or redevelopment of existing dams on a river or stream segment subject to special protection" shall mean any activities associated with the installation, reinstallation or expansion of hydroelectric or hydromechanical generating capacity at existing dams, as defined above, that do not result in any increase in water levels above these dams or any dewatering of river segments below these dams except during construction.

Dams located at the outlet of lakes or ponds specifically identified in 12 M.R.S.A., Sec. 403 shall not be considered to be on the outstanding river segments.

6. **Administering Agency.** The Act shall be administered by the Land Use Regulation Commission within its jurisdiction, including the unorganized townships, plantations and certain organized towns, and by the Board of Environmental Protection elsewhere in the State.

In the event a proposed project and areas directly affected by the project overlap the jurisdictions of the Board and Commission, permitting jurisdiction pursuant to the Act shall be determined as follows:

A. Where the proposed construction, reconstruction, or structural alteration activities occur solely within one agency's jurisdiction, that agency shall be the permitting agency.

B. Where the proposed construction, reconstruction, or structural alteration activities occur within the jurisdictions of both agencies, or where water is diverted in one jurisdiction and other project facilities are located in the other jurisdiction, a case-by-case determination shall be made by the two agencies as to which will administer the permitting process.

Where a proposed project and areas directly affected by the project overlap the State's boundaries, to the extent possible, a joint review of the project will be conducted by the Board or Commission and the agency having similar jurisdiction within the other state or Canadian Province.

7. **Information Requirements.** To receive a permit, every applicant must demonstrate that the criteria of 38 M.R.S.A., Sec. 636 have been met. In all cases, such information shall be required as is deemed necessary by the Board, Commission or their staffs to describe the proposed project and its impacts in sufficient detail to enable the Board, Commission or their staffs to make an informed judgment on a particular project.

Where information required by the Board, Commission, or their staffs is contained in an Application for License or Exemption or an Application for Amendment of License or Exemption for a hydropower project that has been or is being filed with the Federal Energy Regulatory Commission (FERC), that information may be submitted as complete or partial fulfillment of these information requirements.

Because of the differing nature of every project proposed for approval, an applicant is advised to consult with staff of the Commission or Department (whichever is applicable) prior to submitting an application.

8. **Process and Time Limits for Decisions**

A. **Commissioner or Director Action.** For those applications delegated* to the Commissioner of the Department of Environmental Protection or the Director of the Land Use Regulation Commission, the Commissioner or Director shall make a decision as expeditiously as possible, and shall within 60 working days of receipt of a properly completed application, either:

(1) Approve the proposed project upon such terms and conditions as are appropriate and reasonable to protect and preserve the environment and the public's health, safety and general welfare, including the public interest in replacing oil with hydroelectric energy;" (38 M.R.S.A., Sec. 635); or

(2) Disapprove the proposed project, setting forth in writing the reasons for the disapproval;" (38 M.R.S.A., Sec. 635); or

(3) Refer the proposed project to the Board or Commission, as appropriate, in which case the Board's or Commission's decision shall be reached within 105 working days of the agency's receipt of the completed application.

NOTE: Delegation of authority to the Commissioner of the Department of Environmental Protection to make decisions pursuant to the Act is provided for in Chapter I of the Department's Regulations. Delegation of authority to the Director of the Land Use Regulation Commission to make certain decisions pursuant to the Act is provided for by Commission action.]

B. Board or Commission Action. Upon receipt of a properly completed application, the Board or Commission shall either:

(1) Approve the proposed project upon such terms and conditions as are appropriate and reasonable to protect and preserve the environment and the public's health, safety and general welfare, including the public interest in replacing oil with hydroelectric energy;

(2) Disapprove the proposed project, setting forth in writing the reasons for the disapproval; or

(3) Schedule a hearing on the proposed project. Any hearing held under this subsection shall follow the notice requirements and procedures for an adjudicatory hearing under Title 5, Chapter 375, subchapter IV. After any hearing is held under this subsection, the Board (or Commission) shall make findings of facts and issue an order approving or disapproving the proposed project, as provided in subsections 1 and 2." (38 M.R.S.A., Sec. 635.)

The Board or Commission shall make its decision as expeditiously as possible but in no case will the decision be later than 105 working days after acceptance of the application, except as provided in subsection C.

C. Waiver of Time Limits. The Act provides that, following one extension of up to 45 working days, the time limit requirement for decisions may be waived by the Commissioner or Director only at the request of the applicant.

D. Action on Water Quality Certification

[REVISOR'S NOTE: The provisions of this sub-section have been superceded by P.L. 1989 Chapter 309, which revised 38 M.R.S.A. Sec. 634.1, repealed 38 M.R.S.A. Sec. 363-C, and enacted 38 M.R.S.A. Sec. 635-B.]

As provided by 38 M.R.S.A., Sec. 634.1, the issuance of a water quality certificate, as required under the United States Water Pollution Control Act, Sec. 401, shall be mandatory in every case where the Board or Commission approves an application for a hydropower project permit under the Act, except in those cases where the Board or Commission has found that the applicant has not demonstrated that the project will not result in significant harm to water quality or will not violate applicable water quality standards.

The Commissioner or Director, as appropriate, shall act to issue or deny water quality certification within 5 working days following the decision by the Board or Commission to approve or disapprove a proposed project pursuant to 38 M.R.S.A., Sec. 636. Such action shall be based solely on the finding of the Board or Commission pursuant to 38 M.R.S.A., Sec. 636.7(G), as to

whether there is a reasonable assurance that the project will not violate applicable water quality standards.

As provided by 38 M.R.S.A., Sec. 363-C, the waters of a new or proposed hydroelectric impoundment shall be deemed to be Clasp GP-A, if the Commissioner finds that it is reasonably likely that the impoundment would : (1) thermally stratify; (2) exceed 30 acres in surface area; and (3) not have any upstream direct discharges except cooling water. The Commissioner shall notify the Board or Commission, as appropriate, of any classification determination made pursuant to this statutory provision as soon as sufficient information is available to make such a determination.

9. Terms and Conditions of Approval

A. Authority. The Act provides that the Board or Commission may approve "the proposed project upon such terms and conditions as are appropriate and reasonable to protect and preserve the environment and the public's health, safety and general welfare, including the public interest in replacing oil with hydroelectric energy. These terms and conditions may include, but are not limited to:

(A) Establishment of a water level range for the body of water impounded by a hydropower project;

(B) Establishment of instantaneous minimum flows for the body of water affected by a hydropower project; and

(C) Provisions for the construction and maintenance of fish passage facilities."

"In those cases where the proposed project involves maintenance, reconstruction or structural alteration at an existing hydropower project and where the proposed project will not alter historic water levels or flows after its completion, the (Board or Commission) may impose temporary terms and conditions of approval relating to paragraph A or paragraph B but shall not impose permanent terms and conditions that alter historic water levels or flows." (38 M.R.S.A., Sec. 635.1)

B. Nature of Terms and Conditions. Such case-specific terms and conditions as may be placed by the Board or Commission on its approval of a proposed project shall specify particular means of satisfying minor or easily corrected problems, or both, relating to compliance with the Act and shall not substitute for or reduce the burden of proof of the applicant to demonstrate to the Board or Commission that each of the standards of the Act has been met.

C. Standard Conditions of Approval. Unless otherwise specifically stated in the approval, all Board, Commissioner, Commission, and Director approvals shall be subject to the following standard conditions:

(1) Limits of Approval. This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. All

variances from the plans and proposals contained in said documents are subject to the review and approval of the Board or Commission prior to implementation.

(2) Noncompliance. Should the project be found, at any time, not to be in compliance with any of the conditions of this approval, or should the permittee construct or operate this project in any way other than specified in the application or supporting documents, as modified by the conditions of this approval, then the terms of this approval shall be considered to have been violated.

(3) Compliance with all Applicable Laws. The permittee shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation.

(4) Inspection and Compliance. Authorized representatives of the Board, Commission or the Attorney General shall be granted access to the premises of the permittee at any reasonable time for the purpose of inspecting the construction or operation of the project and assuring compliance by the permittee with the conditions of this approval.

(5) Initiation and Completion of Construction. If construction is not commenced within 3 years and completed within 7 years from the date of issuance of this permit, this approval shall lapse, unless a request for an extension of these deadlines has been approved by the Board or Commission.

(6) Construction Schedule. Prior to construction, the permittee shall submit a final construction schedule for the project to the Commissioner or Director.

(7) Approval Included in Contract Bids. A copy of this approval must be included in or attached to contract bid specifications for the project.

(8) Approval Shown to Contractor. Work done by a contractor pursuant to this approval shall not begin before a copy of this approval has been shown to the contractor by the permittee.

(9) Notification of Project Operation. The permittee shall notify the Commissioner or Director of the commencement of commercial operation of the project within 10 days prior to such commencement.

(10) Assignment or Transfer of Approval. This approval shall expire upon the assignment or transfer of the property covered by this approval unless written consent to transfer this approval is obtained from the Board or Commission. To obtain approval of transfer, the permittee shall notify the Board or Commission 30 days prior to assignment or transfer of property which is subject to this approval. Pending Board or Commission determination on the application for a transfer or assignment of ownership of this approval, the person(s) to whom such property is assigned or transferred shall abide by all of the terms and conditions of this approval. To obtain the Board's or Commission's approval of transfer, the proposed assignee or transferee must demonstrate the financial capability and technical ability to (1) comply with all terms and conditions of this approval and (2) satisfy all other applicable statutory criteria.

A "transfer" is defined as the sale or lease of property which is the subject of this approval, or the sale of 50 percent or more of the stock of or interest in a corporation or a change in a general partner of a partnership which owns the property subject to this approval.

10. Access to the Site. The filing of an application for approval of a development pursuant to 38 M.R.S.A., Sec. 633, constitutes the granting of permission by the applicant to allow Board or Commission members and their staffs, and others authorized by the Board or Commission access to the site of the proposed development in order to facilitate review of such application.

11. Severability. The provisions of this Chapter are severable. If a section, sentence, clause, or phrase of this Chapter is adjudged by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this Chapter.

AUTHORITY: 5 M.R.S.A., Chapter 375
12 M.R.S.A., Chapters 200 and 206-A
38 M.R.S.A., Sec. 343-A and Sec. 630-637

EFFECTIVE DATE: September 28, 1987 (91 days after the adjournment of the First Regular Session of the 113th Maine Legislature, as provided by 38 M.R.S.A., Sec. 637.)

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

Chapter 514: REGULATIONS CONCERNING THE USE OF AQUATIC PESTICIDES

SUMMARY: This regulation defines the criteria for the use of aquatic pesticides within the State of Maine.

1. **Definition.** An aquatic pesticide is any substance (including biological agents) applied in, on or over the waters of the State or in such a way as to enter those waters for the purpose of inhibiting the growth or controlling the existence of any plant or animal in those waters.

2. **Criteria for Approving a License to Use Aquatic Pesticides**

   A. Except as provided in 38 M.R.S.A. Section 362-A, no permit for aquatic pesticide use will be issued for a pesticide which is not registered for the intended use by the United States Environmental Protection Agency and the Maine Department of Agriculture.

   B. No permit for aquatic pesticide use will be issued unless the applicant or agent for the applicant is certified and licensed in aquatic pest control by the Maine Board of Pesticides Control.

   C. A permit for aquatic pesticide use will be issued only if the applicant provides adequate protection for non-target species.

   D. A permit for aquatic pesticide use will be issued only if the applicant can demonstrate a significant need to control the target species and that pesticide control offers the only reasonable and effective means to achieve control of the target species. Demonstration of significant need may include, but not be limited to, health risk, economic hardship, or loss of use.

   E. In addition to paragraphs (A) through (D), any discharge of aquatic pesticides, alone or in combination with allother discharges, shall meet all other applicable requirements of Maine's waste discharge laws including, but not limited to, the provisions of 38 M.R.S.A. Sections 464 and 465.

AUTHORITY: 38 M.R.S.A. Section 343-A

EFFECTIVE DATE: July 5, 1981

Amended: January 29, 1989

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

Chapter 550: DISCONTINUANCE OF WASTEWATER TREATMENT LAGOONS

SUMMARY: These Rules define the term wastewater treatment lagoon and outline the procedures by which this type of lagoon maybe discontinued either temporarily or permanently.

1. Definitions

   A. **Wastewater Treatment Lagoons.** Wastewater treatment lagoons means a lagoon, basin or pond consisting of a relatively shallow body of water contained in an earthern basin, lined or unlined, or controlled shape designed for the purpose of storing and/or treating wastewater.

   B. **Permanent Discontinuance.** Permanent discontinuance means the cessation of depositing wastewater into lagoons for more than ninety (90) days.

   C. **Temporary Discontinuance.** Temporary discontinuance means the cessation of depositing wastewater into lagoons for ninety (90) or less days.

2. **Notice of Discontinuance.** Any person who discontinues the use of a lagoon shall give notice to the Commissioner, in writing, no later than fifteen (15) days after wastewaters have ceased to enter the lagoon.

3. **Reclamation Plan.** The notices of discontinuance shall be accompanied by a reclamation plan and/or maintenance plan satisfactory to the Commissioner. The method of sludge disposal and the selection of a sludge disposal area shall be in accordance with applicable State laws and regulations.

4. **Permanent Abandonment.** Any person who intends to permanently discontinue the use of a lagoon shall follow the following minimum procedures:

   A. The contents of the lagoon shall be diluted by uncontaminated water until the effluent parameters within the lagoon are equal to or less than the final discharge parameters.

   B. The discharge at the time of dilution shall be consistent with the terms of the discharge license.

   C. When the contents of the lagoons are equal to or less than the final discharge parameters the lagoon area shall be emptied at a rate consistent with the receiving waters classification requirements.

   D. When the liquid in the lagoon has been completely discharged and/ or evaporated the sludge in the lagoon shall be (1) removed, or (2) if appropriate used as a soil conditioner.

   E. Within fifteen (15) days of removal of the sludge or preparing the soil/sludge mixture the lagoon area shall be graded and seeded with a perennial type plant growth that will prevent erosion and leaching of contaminants into surface and ground waters.

   F. If any any time during the dewatering, sludge removal, soil-sludge mixture, and/or seeding, process water is added to the lagoon area by natural or artificial means the dewatering process shall be repeated in accordance with these regulations.

5. **Temporary Discontinuance.** Any person who intends to temporarily discontinue a lagoon shall follow the following minimum procedures:

   A. The contents of the lagoon shall be maintained in an aerobic condition.

   B. Solids of any type inconsistent with the terms of the discharge license shall not be allowed to be discharged in the final effluent.

   C. The lagoon area may only be emptied in accordance with (1) the terms of the discharge license, or (2) any reasonable terms the Board of Environmental Protection may require of the dischargee.

6. **Exemption.** The Commissioner may upon written request exempt any seasonal lagoon area from Section 4 of this regulation. The Commissioner in granting a seasonal exemption shall specify the maintenance procedures to be followed while the lagoon area is not receiving wastewaters.

After public notice and public hearing November 21, 1977 the above regulation is hereby adopted this 21st Day of December, 1977.

AUTHORITY: 38 M.R.S.A. Section 361

EFFECTIVE DATE: December 27, 1974

Amended: February 8, 1978

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

These Rules provide for the protection of water quality whenever it becomes necessary to discharge the contents of a lagoon to a body of water when in the process of discontinuing the use of a lagoon as a treatment process.

Chapter 530.5: ENVIRONMENTAL EVALUATION: SURFACE WATERS TOXICS CONTROL PROGRAM

SUMMARY: The surface waters of the State are managed to prevent contamination from toxic pollutants in toxic amounts in order to meet the goals of the Clean Water Act, Maine's Water Classification Program and other water quality laws. Maine water pollution control statutes establish ambient water quality criteria and discharge limits to control the level of toxic pollutants in surface waters. Reduction of surface water toxic pollutants must follow the requirements of Maine's pollution prevention statute (38 M.R.S.A. Section 361-A (3-B) and Chapter 26). The State is also obligated to determine, pursuant to Section 401(a) of the Clean Water Act, as amended, that a discharge proposed for a USEPA-NPDES permit meets State water pollution control standards. USEPA-NPDES rules (40 CFR 122.44(d)) require that water quality based effluent limitations and conditions must be established in a permit when necessary to achieve State water quality standards. This rule sets forth ambient water quality criteria for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

A. Ambient Water Quality Criteria for Toxic Pollutants

1. **Narrative Water Quality Criteria.** Except as naturally occurs, surface waters must be free of pollutants in concentrations which impart toxicity and cause those waters to be unsuitable for the existing and designated uses of the waterbody.

2. **Numerical Water Quality Criteria**

   a. Statewide Criteria

      i. Statewide Criteria for toxic pollutants with national water criteria. Except as naturally occurs, levels of toxic pollutants in surface waters must not exceed federal water quality criteria as established by USEPA, pursuant to Section 304(a) of the Clean Water Act, or alternative criteria established below. For any toxic pollutant believed to be carcinogenic, a risk level that would result, at most, in one additional cancer per one million people (risk of 1×10^{-6}) exposed to the carcinogen must be used in determining the human health criterion. Any changes in this risk level for specific carcinogenic substances must be approved by the Board by rule or as part of a waste discharge license proceeding establishing a site-specific criterion.

      ii. Alternative Statewide Criteria for toxic pollutants with national criteria. Alternative statewide criteria must be adopted through rulemaking and must protect the designated uses of the assigned classification [38 M.R.S.A. Section 420(2)(B)] equally as well as the USEPA criteria. The sponsor of the proposal shall also provide the Department with a thorough literature search of the properties of the toxicant, including but not limited to its toxicity, carcinogenicity, teratogenicity, mutagenicity, bioaccumulation, and regulation by other states or foreign countries. In addition to the following minimum requirements, the Board may incorporate any other information shown to be pertinent in determining these criteria.

AA. Aquatic Life Criteria. Minimum requirements for alternative statewide aquatic life criteria include testing as in A(2)(b)(i)(AA) below for all discharges with a significant amount of the pollutant of concern, or the ten discharges with the highest level of the pollutant, whichever is less. The numeric criteria shall be no greater than the lowest safe value found in any of these tests.

BB. Human Health Criteria. Alternative statewide human health criteria must be established by the Department in consultation with the Department of Human Services on a case by case basis following the general outline specified by USEPA in "Criteria for the Protection of Human Health" (45 Federal Register No. 231 pp.79323-79341, 28 November 1980). The nature of the toxicant, bioaccumulation and human consumption rates are among the factors that must be considered.

iii. Statewide criteria for toxic pollutants lacking national criteria. The requirements of A(2)(a)(ii)(AA) and (BB) of this rule apply also to establishment of criteria for toxic pollutants lacking national criteria.

b. Site-Specific Criteria. Site-specific criteria alternative to applicable statewide criteria and reflecting circumstances different from or unaddressed by the statewide criteria may be adopted by the Board as part of a waste discharge license proceeding, pursuant to 38 M.R.S.A. Sections 413, 414, 414-A, and 420. Any site-specific criteria adopted must protect designated uses equally as well as applicable statewide criteria. However, the discharger must also provide the Department with a thorough literature search of the properties of the toxicant, including but not limited to, its toxicity, carcinogenicity, teratogenicity, mutagenicity, bioaccumulation, and regulation by other states or foreign countries. In addition to the following minimum requirements, the Board may incorporate any other information shown to be pertinent in determining these criteria.

i. Site-specific criteria for toxic substances with national water quality criteria

AA. Aquatic Life Criteria

(1) A plan of study must be submitted to the Department for review and approval prior to initiation of testing. Methods follow those specified in subsection E. of this rule.

(2) Minimum requirements include toxicity tests conducted generally according to the most recent USEPA Water Quality Standards Handbook and Water-effect Ratio Guidance.

(3) Both acute and chronic tests must be conducted quarterly for at least one year. Receiving water should not be collected for use during floods or immediately after significant storm events.

(4) For complex effluents with more than one potentially toxic pollutant, both dilution waters (receiving water and laboratory water) must be spiked with all pollutants present in the effluent in significant amounts, except the pollutant of interest, or the whole effluent at levels representative of the calculated receiving water

concentrations (RWC) at the appropriate design flow. Pollutants present in significant amounts relative to toxic levels must be determined by means of at least four priority pollutant scans within two years of submitting the plan of study to the Department. The pollutant of interest must be added at various concentrations bracketing the target concentration (the existing or desired license limit) to determine an appropriate site-specific criterion. This procedure must be repeated for each pollutant for which site-specific criteria are to be proposed.

(5) For discharges to freshwater, the water flea *(Ceriodaphnia dubia)* reproductive and survival test, and the brook trout (*Salvelinus fontinalis*), or other salmonid approved by the Department, survival and growth tests must be conducted. For discharges to marine waters, Mysid shrimp (*Mysidopsis bahia*) survival test, Inland Silverside (*Menidia berrylina*)7-day larva survival and growth test, and the sea urchin (*Arbacia punctulata*) fertilization test must be conducted.

(6) Results should be based on measured concentrations.

(7) For heavy metal tests, the metal must be added in the form of inorganic salts of relatively high solubility, such as nitrate salts or in some cases, chloride or sulfate salts.

BB. Human Health Criteria. Requirements are the same as in subsection A(2)(a)(ii)(BB) of this rule.

ii. Site-specific criteria for toxic substances lacking national criteria

AA. Aquatic Life Criteria. Requirements are the same as in subsection A(2)(b) of this rule.

BB. Human Health Criteria. Requirements are the same as in subsection A(2)(a)(ii)(BB) of this rule.

B. WET Testing and Chemical-Specific Testing for Toxic Pollutants

1. Dischargers Subject To This Subsection. All licensed industrial dischargers of process wastewater, as defined under NPDES regulations, and all publicly operated treatment works (POTWs) discharging to surface waters must meet the requirements of this subsection. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may cause or have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria.

2. Notice Of Testing And General Requirements

(a) In order to characterize the effluent discharged for purposes of renewing waste discharge licenses, all subject dischargers must carry out a toxicity testing program consisting of screening tests and surveillance tests according to the schedule set forth in this and the following subsections. This testing program must be conducted on effluents representative of normal operating conditions.

(b) Screening tests must be performed during the year preceding each application for license renewal. Dischargers with licenses pending renewal or expiring within one year before the filing of this rule must begin toxicity testing within 90 days of the effective date of this rule and complete all testing requirements unless otherwise specified by the Department. All relevant data available must be submitted at time of application. All remaining data necessary for completion of the required program must be submitted within 30 days of collection unless otherwise specified by the Department. In order to ensure compliance with 38 M.R.S.A. Section 420, all other dischargers must begin testing within 90 days of notification by the Department or one year prior to license expiration and submit all data applicable to this rule within 30 days of the completion of the required toxicity testing.

(c) Where screening tests demonstrate that a discharge does not cause, have a reasonable potential to cause or contribute to an excursion exceeding a numerical or narrative water quality criterion [see subsection D(2)], surveillance tests will be conducted until screening tests are repeated prior to the next license renewal.

(d) Those dischargers whose licenses are pending renewal or whose licenses expire in less than one year from the effective date of this rule may be credited for tests done in accordance with USEPA or Department protocols in the three year period preceding the screening testing required in subsection B(6) in the following manner:

i. Acute tests may be credited for acute test requirements and chronic tests credited for chronic test requirements;

ii. LC50 acute WET tests may be credited toward required chronic tests on the same species if the test result (in percent effluent) exceeds the chronic receiving water concentration (in percent effluent) by a factor of 10 or more;

iii. NOEL acute WET tests may be credited toward required chronic tests on the same species if the test result (in percent effluent) exceeds the chronic receiving water concentration by a factor of 3 or more.

(e) Crediting for Sludge Priority Pollutant data. The Department may allow credit for testing of organic priority pollutants conducted on sludge generated by a waste treatment facility. In doing so, the Department will take into consideration physical characteristics including solubility, volatility and partitioning between aqueous and solid phases to determine for which compounds sludge testing is a reliable indicator of their presence in the effluent. Where it is determined that sludge is a reliable indicator and compounds are not found in significant concentrations they will be assumed to be absent in the effluent, and the next required effluent testing will be waived. In cases where compounds are detected in the sludge, effluent testing shall be conducted as required. In order for sludge testing to be credited, it must be conducted with approved methods on fresh sludge that is representative of that produced by the facility.

3. **Testing Frequency for Licensed Discharges.** The basis of this categorization is the relative risk of toxic contamination of receiving water by a discharge. Dilution of the discharge in the receiving water is the primary variable used to determine the testing frequency. In specific cases, the nature

of the wastewater itself, its volume, the level or type of treatment, or the nature of the receiving water may modify the testing frequency based on simple dilution.

a. Whole Effluent Toxicity (WET) Testing Frequency

Discharges specified below must be tested at the stated frequency.

i. HIGH FREQUENCY:

AA. All industrial discharges of process wastewaters;

BB. POTWs with a dilution ratio of less than 20:1;

CC. POTWs that have been required by USEPA to adopt pretreatment programs;

DD. POTWs that receive 10% or more of their average daily flow from sources for which pretreatment standards have been promulgated by the USEPA; and

EE. POTWs with unresolved toxicity problems associated with their discharge.

ii. MEDIUM FREQUENCY: Discharges that do not fall into the high testing frequency group but do meet either of the following descriptions:

AA. POTWs with a dilution ratio greater than 20:1 but less than 100:1; or

BB. POTWs that receive greater than zero but less than 10% of their average daily flow from sources for which pretreatment standards have been promulgated by the USEPA.

iii. LOW FREQUENCY: Discharges are POTWs with a dilution factor greater than 100:1 and free of defining characteristics of discharges in the high or medium frequency groups.

b. Chemical Testing Frequency. Discharges specified below must be tested at the stated frequency.

i. HIGH FREQUENCY:

AA. Industrial discharges of process wastewaters;

BB. POTWs that discharge more than 1.0 million gallons of wastewater per day;

CC. POTWs that receive 10% or more of their average daily flow from sources for which pretreatment standards have been promulgated by the USEPA;

DD. POTWs that have been required by USEPA to adopt a pretreatment program; and

EE. POTWs with unresolved toxicity problems associated with their discharge.

ii. MEDIUM FREQUENCY: Discharges that do not fall into the high frequency group but meet the following description:

POTWs that receive greater than zero but less than 10% of their average daily flow from sources for which pretreatment standards have been promulgated by the USEPA.

iii. LOW FREQUENCY: Discharges that do not fall into the high or medium groups.

4. Test organisms

a. Marine. Test species for discharges to marine waters are Inland Silverside, *Menidia berrylina* (acute and chronic), Mysid shrimp, *Mysidopsis bahia* (acute only), and the sea urchin, *Arbacia punctulata*, (chronic only).

b. Freshwater

i. Test species for freshwater are the waterflea and either trout or fathead minnows as determined below.

ii. Where more than one test per year is required, half of the fish tests must be conducted with fathead minnows and half with trout.

iii. Where only one test per year is conducted the species used must be:

AA. Trout for the low and medium WET testing frequencies.

BB. Fathead Minnows for the high WET testing frequency, until USEPA accepts the trout chronic test, after which trout will be used exclusively.

5. Chemical Specific Testing

a. Chemical specific testing refers to analysis for levels of priority pollutants (promulgated according to Section 307 (a) of the CWA) in a licensed discharge.

b. Chemical specific analyses for toxic pollutants it addition to the priority pollutants will also be required if the Department has reason to believe that specific discharges contain such compounds in concentrations that may prevent attainment of water quality standards of the waterbody (38 M. R. S. A. Section 464(4)(A)(4)).

c. All chemical-specific testing must be carried out by methods that permit detection of a pollutant at existing levels in the discharge or that achieve minimum levels of detection as specified by the Department.

d. Whenever WET tests and chemical specific tests are both required, tests must be performed on the same sample of effluent.

6. Test Schedules

a. Whole effluent toxicity testing

i. Screening Tests: Acute and chronic tests are required on each occasion of testing. Tests in the high and medium frequency groups should be spaced equally over the testing period.

Testing Frequency	High	Medium	Low
Number of tests	4/year	2/year	1/year

ii. Surveillance Tests:

Testing Frequency	High	Medium	Low
Number of tests	1/year	1/year	1/year

b. Chemical-specific testing:

i. Screening Tests: Tests in the high and medium frequency group must be spaced equally over the testing period.

Testing Frequency	High	Medium	Low
Number of tests	4/year	2/year	1/year

ii. Surveillance tests:

Testing Frequency	High	Medium	Low
Number of tests	1/year	1/year	1/year

7. **Reduced Testing Frequencies and Waivers from Testing Requirements.** Under conditions specified in this subsection, the Department will review requests for reducing the frequency of toxicity testing. All requests must be made prior to the initiation of screening tests unless specified below.

a. Reduced Testing of Industrial Discharges. The Department may reduce the testing requirements of subsection B. of this rule and replace them with testing adequate to characterize the toxicity of known pollutants when the discharger provides information adequate to:

i. Identify all the toxic pollutants used in its processes;

ii. Demonstrate that all chemicals used in or formed by the discharger's industrial processes are not known or suspected to result in the formation of toxic pollutants in toxic amounts; and

iii. Demonstrate that the facility does not process or treat waters known or suspected to contain toxic pollutants in toxic amounts.

b. Waiver of Testing of Industrial Discharges. The Department may waive all testing requirements when the discharger provides information adequate to demonstrate that:

i. No toxic pollutants are used in its processes in toxic amounts;

ii. Chemicals used in or formed by the discharger's industrial processes are not known or or suspected to result in the formation of toxic pollutants in toxic amounts;

iii. The facility does not process or treat waters known or suspected to contain toxic pollutants.

c. Reduced Testing of Municipal Discharges. The Department may reduce the testing requirements of subsection B of this rule if specific conditions of this subsection are met. To determine this, the Department shall send a notice and questionnaire to each discharger after the third license year, and the licensee will have 30 days to supply information demonstrating that:

i. The POTW has not been required by USEPA to adopt a pretreatment program nor does it receive 10% or more of its average daily flow from sources for which pretreatment standards have been promulgated by USEPA;

ii. The POTW has completed all required screening tests and subsequent surveillance tests of the last 5 years, pursuant to subsection B(6) of this rule, and the testing demonstrates no exceedence or reasonable potential of exceedence of the limits of these tests; and

iii. The POTW demonstrates that none of the following has occurred since the previous screening tests:

AA. Increases in the number, types and flows of industrial, commercial, or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic;

BB. Changes in the condition or operation of the facility that may increase the toxicity of the discharge;

CC. Changes in stormwater collection or infiltration/inflow affecting the facility that may increase the toxicity of the discharge; or

DD. Increases in the type or volume of hauled wastes accepted by the facility.

d. Exemption of Certain Municipal Discharges, Commercial Discharges, and Domestic Discharges from Testing. The following discharges are exempt from testing requirements in the absence of evidence indicating that the discharge contains toxic pollutants in toxic amounts:

i. Discharges from schools;

ii. Discharges from facilities licensed to discharge less than 50,000 gallons per day of domestic wastewater, provided no holding tank wastes containing chemicals are accepted by the facility.

iii. Discharges from publicly owned treatment works which are not classified by USEPA as major and which discharge to receving waters with a dilution ratio of at least 1000:1, provided that the POTW receives no process wastes from sources for which pretreatment standards have been promulgated by the USEPA; and

iv. Discharges from combined sewer overflow discharge points, provided the owner of the sewerage system is conducting or participating in a pollution abatement program.

C. Water Quality-based Effluent Limits for Waste Discharge Licenses

1. **Limits Required.** The Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses as needed to control the level of toxic pollutants in surface waters. The Department shall use its authority pursuant to Section 401(a) of the Clean Water Act, as amended, to require that NPDES permits issued by USEPA contain appropriate discharge prohibitions, effluent limits, and monitoring requirements to control the level of toxic pollutants in surface waters. Appropriate water quality based effluent limits must be established in the license if a discharge contains pollutants that are, or may be discharged at levels that cause, have a reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion. The license must also control whole effluent toxicity when discharges. cause; have a reasonable potential to cause or contribute to an ambient excursion above the narrative water quality criterion. The whole effluent toxicity limit is the no observed effect level (NOEL). The NOEL (in percent effluent) must be greater than the receiving water concentrations (RWC), in percent effluent, at the appropriate design flows for both acute (A) and chronic (C) exposures.

A-NOEL>A-RWC
C-NOEL>C-RWC

NOTE: State and Federal water pollution control laws also specify independently applicable technology-based effluent standards to abate discharges of pollutants.

2. **Determination of Reasonable Potential to Exceed Receiving Water Quality Criteria.** The Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-based Toxics Control" (USEPA/505/2-90-001) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality-based limits must be established in the license upon issuance. The Department will also evaluate the following factors to determine the need for water quality-based limitations upon relicensing:

a For industrial discharges: existing controls on point source and nonpoint source pollution, raw materials, processes, products, best management practices, wastewater treatment; for POTW

discharges: existing controls on point source and nonpoint source pollution, significant indirect discharges, pretreatment, treatment processes and efficiency of treatment;

b. Effluent monitoring data and the variability of the pollutant in the effluent: in characterizing effluent quality, the Department will use the statistical approach in Section 3.3.2 and Table 3-2 of EPA's 'Technical Support Document for Water Quality-based Toxics Control" EPA/505/2-90001 to determine representative effluent concentrations for dischargers who have completed the testing required under subsection C.

c. Receiving water quality, including classification and ambient data;

d. Total maximum daily load and wasteload allocations for the waterbody; and

e. Dilution of the effluent in the receiving water.

3. **Determination of Exceedence of Criteria.** The Department will review all testing data as received. If these data indicate that the discharge is causing an exceedence of applicable water quality criteria, then: (1) the Department must notify the licensee of the exceedence; (2) the licensee must submit a toxics reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutants and meet receiving water classification standards within 180 days of the Department's approval of the TRE.

D. **Water Quality-based Effluent Limit Derivation.** Water quality-based limits must be developed by one or both of the following procedures.

1. **Specific pollutant approach.** When specific toxic pollutants of known action and interaction are identified in a discharge or potential discharge, the water quality-based effluent limit is determined by use of the applicable numerical water quality criteria for the pollutants and the appropriate dilution described in subsection E(3) below.

2. **Whole effluent approach.** When the existing or proposed discharge contains two or more pollutants whose actions or interactions are unknown or when toxic components cannot be identified, WET effluent limits may be required for the protection of aquatic life. The "acute no observed effect level" (A-NOEL) and the "chronic no observed effect level" (C-NOEL), expressed as percent effluent, must be greater than the actual receiving water concentrations (% of effluent in receiving water at the appropriate stream design flow).

   Note that the receiving water concentration is the inverse of the dilution factor.

3. **Calculation of dilution factors:** A simple dilution model using stream design flows specified in subsection E(4) of this rule must be used to determine allowable effluent limits unless there is information that makes another model approved by the Department more appropriate. All substances are assumed to be conservative. Background concentrations will be included in all calculations, using available site data or other data appropriate for the region.

a. Dilution factors (DF) for freshwater discharges are calculated using the following models:

i. If the entire water supply that ultimately makes up the effluent flow (Qe) is taken from the receiving water upstream of the location from which the stream design flow (Qr) is calculated or measured, then:

DF = Qr/Qe

ii. If part or all of the water supply taken from any other location (Qo) is discharged in the effluent, then:

DF = (Qr + Qo)/Qe

b. For estuarine and marine discharges, dilution factors (DF) are calculated as follows.

i. For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE or CORMIX. Where far-field impacts on sensitive resources such as swimming beaches or clam flats are a concern, other appropriate methods estimating far-field dilution must be used.

ii. For discharges to estuaries, dilution must be calculated using a method determined by the Department to be appropriate for the site conditions. Where freshwater river flow is dominant and instantaneous mixing across the width can be assumed, dilution must be calculated as in subsection E(3)(a). Where tidal flow is dominant or incomplete mixing is assumed, dilution must be calculated as in subsection E(3)(b)(i). Where appropriate, other methods such as dye studies or water quality methods may be used.

4. **Stream design flows.** Stream design flows used in the analyses of dilution factors from dilution models must be consistent with the exposure of the population at risk to any and all toxic pollutants.

a. Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone, according to EPA's Mixing Zone Policy and to ensure a Zone of Passage of at least 3/4 of the cross-sectional area of any stream as required by Department rule. Where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water, by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required Zone of Passage is maintained. Flows that allow bioaccumulation of compounds to levels that are carcinogenic, mutagenic or teratogenic are not to be used in setting effluent limits.

b. Analyses using statewide numerical chronic criteria for aquatic life must be based on 7Q10 stream design flow.

c. Analyses using human health criteria must be based on stream flows consistent with the duration of exposure.

E. WET Testing Procedures. Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow the procedures described in the latesteditions of the following USEPA methods manuals, except as modified by the Department on a case by case basis or as described in this section for the Salmonid Survival and Growth Test.

1. EPA Methods Manuals

Weber, C.I. et al., 1988. "Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Marine and Estuarine Organisms". Office of Research and Development, USEPA, Cincinnati, Ohio. (USEPA/600/4-87/028)

Weber, C.I. et al., 1988. "Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms" (Second edition). Office of Research and Development, USEPA, Cincinnati, Ohio. USEPA 600/4-89/001.

Weber, C.I.(ed.) 1991. "Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms" (Fourth Edition) Office of Research and Development, USEPA, Cincinnati Ohio, USEPA 600/4-90/027.

2. Salmonid Survival and Growth Test. The Salmonid survival and growth test must follow the procedures for the fathead minnow larval survival and growth tests detailed in USEPA's freshwater acute and chronic methods manuals (see references above) with the following modifications:

Species - Brook Trout, *Salvelinus fontinalis*, or other salmonid approved by the Department.

Age - Less than six months old for the first test each year and less than twelve months for subsequent tests.

Size - The largest fish must not be greater than 150% of the smallest.

Loading Rate - < 0.5 g/l/day

Feeding rate - 5% of body weight 3 times daily (15%/day)

Temperature - 12° ± 1°C

Dissolved Oxygen - 6.5 mg/l ,aeration if needed with large bubbles (> 1 mm diameter) at a rate of <100/min

Dilution Water - Receiving water upstream of discharge (or other ambient water approved by the Department)

Dilution Series - A minimum of 5 effluent concentrations (including the instream waste concentration at 7Q10 river flow and monthly average discharge flow limit for chronic test, and

1Q10 river flow and daily maximum discharge flow for acute test); a receiving water control; and control of known suitable water quality

Exception - Where license limits exceed 100% (LC50>100%, NOEC>100%, etc.) an undiluted (100%) effluent concentration may be used instead of the 5 dilutions

Duration - Acute = 48 hours
- Chronic = 10 days minimum

Test acceptability - Acute = minimum of 90% survival in 2 days
- Chronic = minimum of 80% survival in 10 days; minimum growth of 20 mg/gm/d dry weight in controls, (individual fish weighed, dried at 100°C to constant weight and weighed to 3 significant figures)

AUTHORITY: 38 M.R.S.A. Sections 420 and 464

EFFECTIVE DATE: October 12, 1994 (06-096 Chapter 584 repealed and replaced by this section)

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

NON-SUBSTANTIVE CORRECTION: June 11, 1996 - Defective file from electronic conversion replaced.

AMENDED: May 14, 1997

AMENDED: August 13, 1997

Chapter 570: STORMWATER AND COMBINED SEWER OVERFLOWS

SUMMARY: This rule allows discharges from the overflows of combined municipal sewers to meet "Best Practicable Treatment" requirements by developing an approved abatement plan.

1. **Stormwater and Combined Sewer Overflow Discharges.** For discharges from overflows from combined municipal storm and sanitary sewer systems, the requirement of "Best Practicable Treatment" specified in 38 M.R.S.A. Section 414-A(1)(D) may be met by an agreement by the discharger, as a condition of its license, to develop a plan within a time limit specified by the Board. The plan shall: (1) identify and locate the above discharges, (2) determine the frequency, extent and cause of said discharges, including points of inflow into combined systems, (3) determine the effect of these discharges on the receiving water quality classification, and (4) identify actions which may be taken to treat or abate the discharges; provided, however, that where the Board determines that applicable water quality standards may be violated by any discharge from a combined storm and sanitary system, the Board may order such treatment as it deems necessary to avoid violation of applicable water quality standards.

2. **Effective Date.** These rules shall be effective upon filing with the Office of the Secretary of State.

After public notice and public hearing November 21, 1977, the above regulation is hereby adopted this 21st Day of December, 1977.

AUTHORITY: 38 M.R.S.A. Section 361

EFFECTIVE DATE: March 14,1975

Amended: February 8, 1978

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

To allow municipalities with combined sewer overflows the time to develop and implement a plan to treat or abate those discharges, in a reasonable and orderly manner.

Chapter 573: SNOW DUMPS: EXEMPTION FROM WASTE DISCHARGE LICENSE

SUMMARY: These regulations describe the conditions which snow dumps must meet in order to be exempt from having to obtain a waste discharge license, pursuant to 38 M.R.S.A. §413.

1. **Definition.** "Snow dump" means a facility that is used for the storage and disposal of snow and incidental materials collected in the process of removing snow from parking areas and public and private ways.

2. **Exemption for Certain Snow Dumps**

   A. A waste discharge license shall not be required for the on-site storage or disposal of snow removed from parking areas or the direct discharge of snow removed from bridges, docks, wharves, parking areas or roadways which abut water bodies.

   B. .Snow dumps used for the off-site storage or disposal of snow removed from parking areas or public and private ways shall be exempt from the requirement to obtain a waste discharge license provided that:

      (1) The snow dump is not located on a coastal or inland wetland;

      (2 The snow dump is not located on land which is an aquifer recharge area;

      (3) The snow dump is located no closer than 500 feet to the normal high water line of any great pond;

      (4) The snow dump is located no closer than 100 feet to a tributary to a great pond or to a river or stream with a drainage area of 100 square miles or less above the location of the snow dump;

      (5) The snow dump is located no closer than 20 feet to the maximum high tide line of a tidal water body or to the edge of a river or stream which has a drainage area greater than 100 square miles above the location of the snow dump;

      (6) A silt barrier is placed along the downgradient edge of the snow dump;

      (7) Prior to July I of each year, trash and refuse incidental to snow removal is removed from the surface of the snow dump area; and

      (8) A plant cover is maintained between the snow dump and all permanent and intermittent water bodies located within 500 feet downgradient of the snow dump or, if the snow dump is located on a paved or gravel surface, dirt, sand and gravel is removed from or incorporated into the snow dump site by July 1 of each year.

3. **Snow Dumps Located Below the Maximum High Tide Mark, Below the Normal High Water Line of Rivers and Streams or on Wetland**

No person may establish or maintain a snow dump below the maximum high tide mark of a tidal water body, on or in a river or stream or coastal or inland wetland without first obtaining from the Department of Environmental Protection, a waste discharge license and a wetlands alteration permit or a stream alteration permit, whichever is applicable. A license and permit shall be granted only if the snow dump will comply with the statutory requirements of the applicable laws administered by the Department and only if no practicable alternative up-land location exists for the snow dump.

AUTHORITY: 38 M.R.S.A. §413(2-B)

EFFECTIVE DATE: September 1, 1988

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

Snow from snow removal operations contains pollutants normally associated with winter road maintenance. The snow will typically contain dirt, salt and sand from highway de-icing and products of car exhausts. This regulation provides siting and operating criteria that will prevent surface waters, ground waters and wetlands from being adversely affected by snow dumps. The criteria in Section 2.B. are consistent with the requirements of Section 10 of the Federal River and Harbor Act of 1899 and Section 404 of the Clean Water Act which are administered by the U.S. Army Corps of Engineers and the Environmental Protection Agency.

Chapter 581: REGULATIONS RELATING TO WATER QUALITY EVALUATIONS

SUMMARY: These rules provide for the maintenance of stream and lake classifications without violations by computing capacity of the waters to break down waste and shows fish, wildlife, and organisms in the receiving waters to migrate both up and downstream in an undisturbed section of river adjacent to a waste discharge outfall. In addition, a scale of 0 to 100 is established in order to measure the trophic state or degree of enrichment of lakes due to nutrient input.

1. **Assimilative Capacity--Rivers and Streams.** For the purpose of computing whether a discharge will violate the classification of any river or stream, the assimilative capacity of such river or stream shall be computed using the minimum seven day low flow which occurs once in ten years. Waste discharges shall be appropriately reduced when flows fall below the seven day-ten year-low flow if the Board determines that such reduction is necessary to maintain such applicable classifications.

2. **Minimum Flow--Regulated Rivers and Streams.** For regulated rivers and streams, the Department may establish a minimum flow necessary to maintain water quality standards. This flow will be based upon achieving the assigned classification, criteria and protection of the uses of the stream. The Department will cooperate with appropriate Federal, State and private interests in the development and maintenance of stream flow requirements.

3. **Assimilative Capacity--Great Ponds.** The hydraulic residence time will be used to compute the assimilative capacity of great ponds. Hydraulic residence time will be computed by dividing lake volume by the product of watershed area and the precipitation runoff coefficient.

4. **Reserved**

5. **Zone of Passage.** All discharges of pollutants shall, at a minimum, provide far a zone of passage for free-swimming and drifting organisms. Such zone of passage shall not be less than 3/4 of the cross-sectional area at any point in the receiving body of water. Such zone of passage may be reduced whenever the applicant for a discharge can demonstrate that (a) because of physical phenomena in the receiving body of water such minimum zone cannot be maintained and (b) such minimum zone of passage is not necessary to protect organisms in the receiving body of water from substantial adverse effects.

6. **Great Ponds Trophic State**

   A. Trophic state is the ability of a body of water to produce algae and other aquatic plants. The trophic state of a body of water is a function of its nutrient content and may be estimated using the Maine Trophic State Index (TSI) as follows:

   All Lakes:

   $$TSI = 70 \log (\text{mean chlorophyll a} + 0.7)$$

   Lakes with water color <30 SPU:

   $$TSI = 70 \log (.33 \text{ mean total phosphorus} + 0.7) \text{ or,}$$

$$TSI = 70 \log \left(\frac{105 + 0.7}{\text{mean Secchi disk}} \right)$$

Standardized data requirements for calculating TSI shall be determined by the Department.

B. **Algal bloom.** - An algal bloom is defined as a planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 meters.

C. **Stable or decreasing trophic state.** A GPA water shall be considered to have stable or declining trophic state unless it exhibits (1) a perceivable and sustained increase in its trophic state as characterized by its Trophic State Index or other appropriate indices, or (2) the onset of algal blooms.

AUTHORITY: 38 M.R.S.A., Section 343-A and 465-A.

EFFECTIVE DATE: November 29, 1973
Amended: March 14, 1977
Amended: January 29, 1989

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

These regulations provide the framework for more clearly and comprehensively defined water quality evaluation for both rivers and ponds and allows for optimum management of waters of the State. Sections 1, 2, and 5 define design flows and other requirements for rivers and streams to be used in waste discharge licensing procedures and have not been changed.

Section 6 has been changed to better define the new descriptive standards for classification of lakes and ponds contained in Maine's new Water Classification Program (38 MRSA Section 465-A).

Section 7, Stream Species Diversity Index is deleted since it is no longer used. New biological criteria are currently being developed and will be subject to future rulemaking.

Chapter 582: REGULATIONS RELATING TO TEMPERATURE

SUMMARY: These rules provide safeguards for fresh and salt water fauna in lakes and rivers of the state, by establishing instream limits on temperature resulting from thermal discharges.

1. **Freshwater Thermal Discharges.** No discharge of pollutants shall cause the ambient temperature of any freshwater body, as measured outside a mixing zone, to be raised more than 5 degrees Fahrenheit or more than 3 degrees Fahrenheit in the epilimnion (upper mixed layer) of any lake or pond. In no event shall any discharge cause the temperature of any freshwater body to exceed 85 degrees Fahrenheit at a point outside a mixing zone established by the Board, nor shall such discharge cause the temperature of any waters to exceed the U.S. Environmental Protection Agency's national ambient water quality criteria established to protect all species of fish that are indigenous to the receiving waters at any point outside a mixing zone established by the Board. Site specific criteria, generated from a study conducted according to DEP approved methods for indigenous species of fish as defined in 38 M.R.S.A. Sec. 466, may be substituted for national ambient water quality criteria, so long as the site specific criteria are no less protective of species found to be indigenous to those waters, and so long as the public participation requirements of federal and state law, including those found at 40 CFR Part 25, have been met. When the ambient temperature of any body of water naturally exceeds the limits set forth in this section, no thermal discharge may be allowed which alone or in combination with other discharges would raise the ambient temperature of the receiving water more than 0.5 Degrees Fahrenheit above the temperature which would naturally occur outside a mixing zone established by the Board.

2. to 4. Reserved

5. **Tidal Water Thermal Discharges.** No discharge of pollutants shall cause the monthly mean of the daily maximum ambient temperatures in any tidal body of water, as measured outside the mixing zone, to be raised more than 4 degrees Fahrenheit, nor more than 1.5 degrees Fahrenheit from June 1 to September 1. In no event shall any discharge cause the temperature of any tidal waters to exceed 85 degrees Fahrenheit at any point outside a mixing zone established by the Board.

AUTHORITY: 38 M.R.S.A., Sec. 343-A, 464(5)

EFFECTIVE DATE: November 29, 1973

Amended: February 18, 1989

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

Chapter 585: IDENTIFICATION OF FISH SPAWNING AREAS AND DESIGNATION OF SALMONID SPAWNING AREAS

SUMMARY: This rule sets forth methods for identification of fish spawning areas in Class B waters and designation of salmonid spawning areas in Class C waters.

1. **Identification of Fish Spawning Areas.** Prior to the licensing or relicensing of any wastewater discharge which may affect the dissolved oxygen content of Class B or C waters, the Department shall request the Commissioner of the Department of Inland Fisheries and Wildlife to identify existing and potential fish spawning areas in the receiving water, according to section 2 of this rule, in which higher concentrations of dissolved oxygen are required to ensure spawning, egg incubation, and survival of early life stages of fish species. In Class B waters that have been identified as fish spawning areas, no activity may cause the dissolved oxygen concentration to fall below a 7-day mean of 9.5 parts per million or a 1 day minimum of 8.0 parts per million during the period October 1 to May 14 of the following year.

2. **Methods of identification.** The following methods (by priority) shall be considered by the Department to document fish spawning areas.

   (1) Identification of areas observed by fishery biologists as being utilized by any of these species for spawning.

   (2) Identification of areas as spawning habitat in habitat inventories, river reports or agency files.

   (3) Identification of research findings for the same species in other geographical areas, from scientific literature and Habitat Suitability Models for presently existing species.

   (4) Identification based upon professional opinion of a certified fishery biologist experienced in salmonid ecology.

3. **Designation of salmonid spawning areas.** In Class C waters identified as salmonid spawning areas pursuant to sections 1 and 2 of this rule, the Department shall determine whether or not existing levels of dissolved oxygen in those waters are sufficient to support spawning by comparison with U.S. EPA dissolved oxygen criteria for spawning. If existing dissolved oxygen levels exceed EPA criteria, the Department shall then designate such areas as salmonid spawning areas. No activity may cause the dissolved oxygen in these areas to fall below EPA criteria for the period October 1 to May 14 of the following year. Any person may provide the Department with information pertinent to the identification and designation of salmonid spawning areas using the methods in Section 2.

   If ambient levels of dissolved oxygen are lower than the EPA criteria, then corrective action must be taken or a Use Attainability Analysis (UAA) must be conducted according to the requirements of the federal Clean Water Act and 40 CFR part 131.1.

NOTE: The first part of a UAA is a study to determine whether or not designated uses are met. If they are, despite the fact that the criteria are not, then new site-specific criteria can be set at existing ambient levels. If uses are not met then the Legislature can. after reviewing social and economic factors

following a public participation process, set subcategories of uses which require different criteria. Existing uses must be maintained and protected.

4. **Periodic Review.** Designated salmonid spawning areas may be reviewed and modified by the Department during any reissuance of a wastewater discharge license, or as new information becomes available, in accordance with public participation and other requirements of Section 303c of the Clean Water Act and 40 CFR, part 131.

AUTHORITY: 38 M.R.S.A. Sections 343-A, 464 and 465

EFFECTIVE DATE: February 18, 1989

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

Chapter 586: RULES PERTAINING TO DISCHARGES TO CLASS A WATERS

SUMMARY: This rule establishes criteria to define what constitutes effluent quality necessary to ensure the standards for class A waters are met.

1. **Scope.** Under 38 MRSA section 464 discharges to class A waters must be equal to or better than the receiving water in order to ensure that habitat, aquatic life, and bacteria are as naturally occurs. The following sections define effluent criteria necessary to ensure these requirements are met.

2. **Criterion for pH.** The pH of the discharged effluent shall not be greater than or less than a 0.2 pH unit difference from that of the seasonal median value of the receiving water upstream of the discharge.

3. **Criterion for plant nutrients.** Nutrients in the discharged effluent shall not exceed the seasonal median concentration of nutrients in the receiving water, or a value demonstrated by the applicant to be better than the seasonal median and which does not cause the aquatic life to be other than as naturally occurs.

   The effluent shall not significantly alter the particle size distribution of the downstream floral community or otherwise alter the natural character of the downstream biotic community.

4. **Criterion for temperature.** The temperature of the discharged effluent shall not vary by more than 0.5°F from the temperature of the receiving water at the time of discharge.

5. **Criterion for dissolved oxygen.** In addition to the requirements of 38 MRSA section 465(2)(B) the dissolved oxygen content of the discharged effluent shall not be less than that of the receiving water at the time of discharge.

6. **Criteria for other water quality parameters.** Except as provided above, the concentration in the discharged effluent of biochemical oxygen demand and all constituents listed in Quality Criteria for Water 1986 (EPA 440/5-86-001) shall not exceed the seasonal median concentration as measured in the receiving water upstream of the discharge or prior to a discharge where a suitable upstream site is not available.

7. **Establishment of seasonal values.** For the purpose of establishing seasonal values in the receiving water pursuant to Sections 2, 3, and 6 of this rule, an applicant will provide data based on seasons and sample frequencies approved by the Department on a case by case basis.

AUTHORITY: 38 M.R.S.A., Section 343-A, 464(5), and 465(2)

EFFECTIVE DATE: February 18, 1989
Accepted for filing: February 13, 1989

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

These criteria provide a definition of effluent quality that is equal to or better than the receiving water which can be measured and evaluated for the purpose of permitting discharge facilities. The section of law (38 M.R.S.A. Section 465(2)(C) which contains the equal to or better than language creates certain regulatory ambiguities. While the phrase 'equal to' has an empirical basis which can readily expressed, the phrase 'better than' implies an allowance for change, but does not assign where any benefit can be placed. Certain human benefits may have negative ecological consequences or vice versa. This regulation, therefore, relies on criteria equal to measured ambient values in the receiving water and allows for variation from these measured equivalencies only to account for natural or analytical variances and where these variances are known or expected not to cause any negative impacts either to the ecological balance or to human values. Certain criteria rely on a seasonal time span to specify the period of equivalency. Because water chemistry can vary from moment to moment, this regulation allows the Department to designate appropriate seasonal periods within which data are gathered.

The pH of the water may affect biological communities by either increases or decreases. pH is known to fluctuate, sometimes substantially over brief periods. A sustained variation of + 0.2 pH units from the seasonal median concentrations is not significant and is not expected to have any measurable effect on the biotic community. A measure of central tendency, the median, is used to define what is equal. By using a seasonal median value, the criteria is not strongly affected by widely outlying values. The allowed variation is consistent with natural variations which occur.

This rule limits the discharge of nutrients to the seasonal median concentrations. It is recognized however that impacts from nutrients are dependent on Liebig's Law of the Minimum, that productivity is limited as long as the limiting nutrient is controlled. This rule allows the discharger to exceed the seasonal median concentration for any nutrient if it is demonstrated that a better condition can occur and that the biological community will still be as naturally occurs. A further constraint is placed on the discharger which prohibits significant alterations of the particle size of algae or other organic growths which can create a negative impact on the community.

Temperature of the effluent is limited to a variation of no more 0.5°F from the temperature of the receiving water. This value is consistent with natural daily fluctuations and is a condition to which the biotic community is well adapted.

The dissolved oxygen content of the effluent shall be equal or exceed that of the receiving water at all times but shall never be less than 7 parts per million or 75% saturation as expressed in Section 465(2)(B) of the statute.

Discharge of all other substances of concern is controlled by Section 6. The concentration in the effluent shall not exceed the seasonal median concentration for

any of these constituents in the receiving water. The seasonal median value is chosen for those reasons stated in the above discussion for pH.